Claim Amendments

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A cathodic protection polymeric compound, comprising:

(a) electrically inactive flowable material;

(b) carbonaceous conductive media having an aspect ratio greater than 10:1 (L/W) and selected from the group consisting of carbon fibers, multiple-walled nanotubes, single-walled nanotubes, and combinations thereof dispersed in the flowable material in an amount sufficient to serve as an electron transfer agent in the electrically inactive flowable material; and

(c) sacrificial metal particles also dispersed in the flowable material, wherein the sacrificial metal particles are less noble than a metal substrate to which the compound is intended to contact and wherein a combination of the metal substrate and the flowable material having the carbonaceous conductive media dispersed therein and the sacrificial metal particles dispersed therein is intended to form a passive galvanic circuit to protect the metal substrate by sacrifice of the sacrificial metal particles with the carbonaceous conductive media serving as the electronic transfer agent between the metal substrate and the sacrificial metal particles in the electrically inactive flowable material.

2. (Currently Amended) The compound of Claim 1, wherein the carbonaceous conductive media ~~serve as a carbon-based electron transfer agent and are in the form of particles, platelets, fibers, tubes, or combinations thereof and optionally~~ are functionalized with plating of metal.

3. (Original) The compound of Claim 1, wherein the carbonaceous conductive media are fibers.

4. (Original) The compound of Claim 1, wherein the tubes are multiple-walled nanotubes.

5. (Original) The compound of Claim 1, wherein the tubes are single-walled nanotubes.

6. (Currently Amended) The compound of Claim 1, wherein the flowable material is polymeric binder and is capable of forming a film or coating upon removal of carrier from the flowable material.

7. (Currently Amended) A cathodic protection polymeric compound, comprising:

(a) flowable material;

(b) carbonaceous conductive media dispersed in the flowable material; and

(c) sacrificial metal particles also dispersed in the flowable material, wherein the sacrificial metal particles are less noble than a metal substrate to which the compound is intended to contact, ~~The compound of Claim 1,~~ wherein the flowable material is a pressure sensitive adhesive.

8. (Original) The compound of Claim 1, wherein the metal substrate is iron-containing and the sacrificial metal particles are zinc or aluminum.

9. (Original) The compound of Claim 1, further comprising an ionically conductive agent in the flowable material.

10. (Original) The compound of Claim 9, further comprising a means for reducing passivation of the sacrificial metal particles.

11. (Original) The compound of Claim 10, wherein the means is a complexing agent.

12. (Original) The compound of Claim 1, further comprising an inherently conductive polymer in the flowable material.

13. (Currently Amended) A film formed from the compound of Claim 1, wherein the film on the metal substrate completes a passive galvanic circuit in which the carbonaceous conductive media in the film serve as the electron transfer agent between the metal substrate and the sacrificial metal particles.

14. (Currently Amended) A metal substrate having a surface to which the compound of Claim 1 is contacted wherein the passive galvanic circuit is formed from the metal substrate to the carbonaceous conductive media to the sacrificial metal particles to the carbonaceous conductive media to the metal substrate.

15. (Original) A method of protecting a metal substrate, comprising the step of contacting the compound of Claim 1 with the metal substrate.

16. (Original) A method of using the compound of Claim 1, comprising applying the compound of Claim 1 to a metal substrate, wherein the compound and the metal substrate form a galvanic circuit in which the sacrificial metal particles are anodes and the metal substrate is a cathode and in which the carbonaceous conductive media serve as an electron transfer agent between the anodes and cathode.

17. (Original) The method of Claim 16, wherein the galvanic circuit is passive.

18. (Original) A method of making the compound of Claim 1, comprising the steps of mixing the carbonaceous conductive media into the flowable material and mixing the sacrificial metal particles into the flowable material.

19. (Original) The method of Claim 18, wherein the carbonaceous conductive media are present in an amount of from about 0.01 to about 10 weight percent of total solids of the flowable material, and wherein the sacrificial metal particles are present in an amount of from about 0.1 to about 95 weight percent of the total solids of the flowable material.